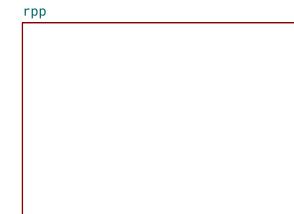
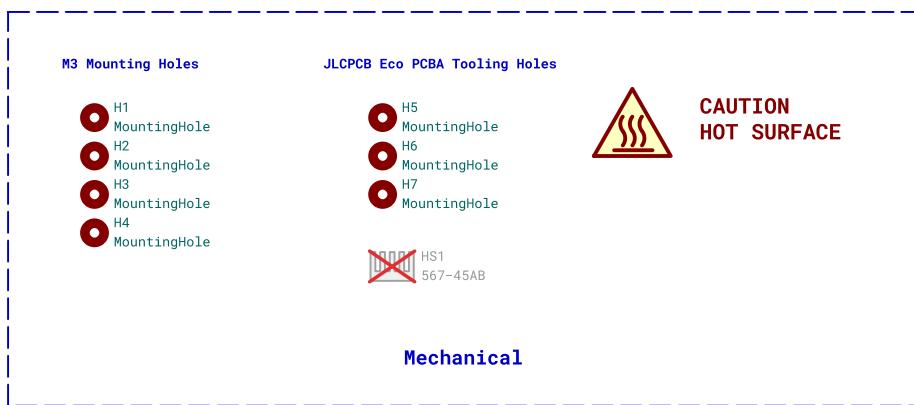


Revision History

Model	Revision	Date	Description
SSDP3A0	A	2025-07	Concept design using the LM70880 buck converter and LM5069-1 hotswap controller. Abandoned due to supply chain issues and cost constraints.
SSDP3A1	A	2025-08	Concept design using the LMS146 buck controller and TPS2490 hotswap controller. Abandoned due to space and cost constraints.
SSDP3A2/SSDV3	A	2025-09	Concept design using the LMS146 buck controller in an 1/8 brick form factor. Accepted design for revision.
	B	2025-10	Concept design using the cheapest parts available on LCSC. Limited part availability and NRND parts made future production of this revision difficult.
	C	2025-10	Prototype design featuring reverse polarity protection in exchange for a smaller TVS diode on the input. Smaller, active-production PQFN-8 FETs used in place of SO-8 FETs. Used for preliminary integration testing and validation.
	D	2025-11	Production revision from Rev. C., addressing issues found in testing: - Fixed electrolytic input capacitor unprotected from reverse polarity. - Added missing thermal vias for CSD1953703 footprints. - Replaced RPP ground diodes with 100V rated diodes. - Revised capcaitor selection for higher temperature rating: X5R -> X7R. - Copper pour patching. - Refactored schematic for A4 paper.

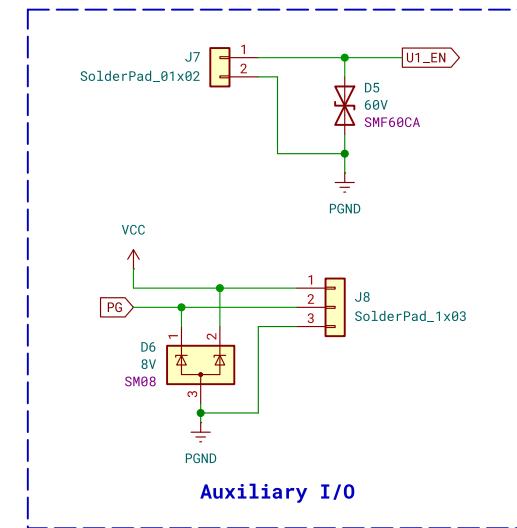


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buck_converter



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A 12S battery eliminator circuit (BEC) for UAS applications.

Julian Joaquin

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Title: Super Step Down V3

Size: A4 Date: 2025-11-04

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Rev: D

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A

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B

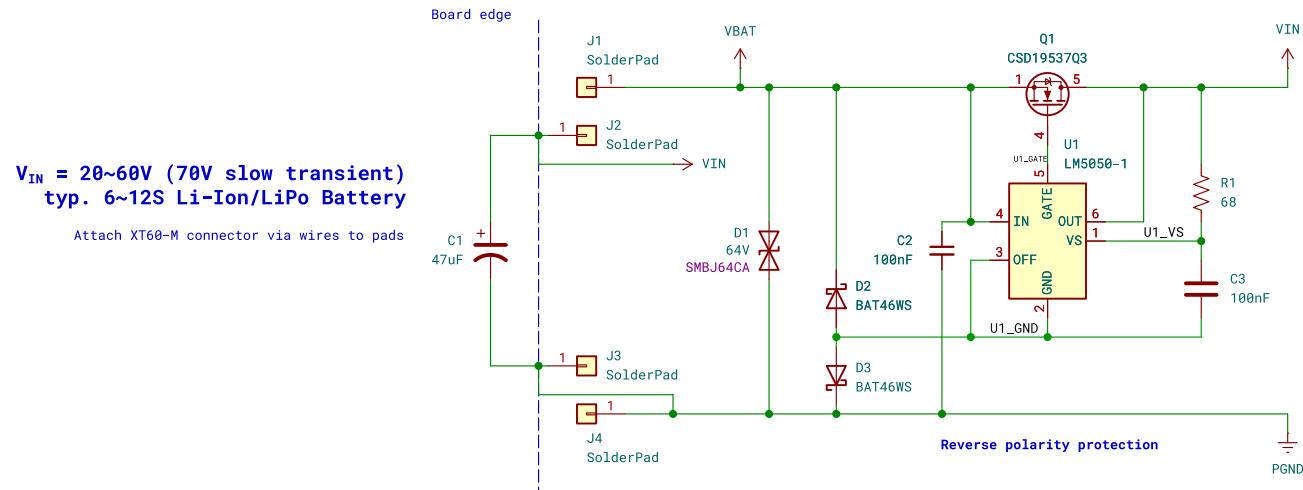
B

C

C

D

D



PWR_FLAG ◇ PGND
 PWR_FLAG ◇ VBAT
 PWR_FLAG ◇ U1_GND

A 12S battery eliminator circuit (BEC) for UAS applications.
 Julian Joaquin

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Title: Super Step Down V3

Size: A4 Date: 2025-11-04

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